Allotment Evaluation (AE)
For
Mt. Chalchihuitl (#828)

Permittee		Authorization Number 3001504		
Livestock Use	Preference AUMs	Allotment 00828	Active 34	Suspended 0
	Period of Use	Allotment Mt. Chalchihuitl	Kind 11 Cattle	Season of Use 12/01 – 02/28
	Kind of Livestock	Cow Calf		
	Percent Public Land	AUMs are authorized at 100% public land		
Allotment Profile	Physical Description	Allotment 828 is located approximately 3 miles south of La Cienega in Santa Fe County, New Mexico. Elevation on this allotment is roughly between 6,100 and 7,000 feet. Landforms on the allotment include; uplands and volcanic cones. This allotment consists of four parcels. Six soil types are identified within the BLM parcels. Soils within the parcels are: Cochiti extremely cobbly loam, 15 to 35 percent slopes. This soil consists of cobbly loams with a rooting depth over 60 inches. Parent materials include: Colluvium and slope alluvium derived from monzonite. Average annual precipitation in that area ranges from 13 to 15 inches. Vegetation is characterized by twoneedle pinyon, mountain mahogany, Gambel's oak, blue grama, oneseed juniper and sideoats grama. Khapo sandy loam, 3 to 8 percent slopes. This soil consists of sandy loams with a rooting depth greater than 60 inches. Parent materials include: Slope alluvium derived from granite, gneiss, schist, loess, and volcanic ash. Average annual precipitation in that area ranges from 10 to 13 inches. Vegetation is characterized by blue grama, black grama, galleta, ring muhly and broom snakeweed. Pastorius very cobbly loam, 3 to 5 percent slopes. This soil consists of cobbly loams, with rooting depths greater than 60 inches. Parent material of alluvium derived from monzonite comprises this soil. Average annual precipitation in this complex ranges from 14 to 18 inches. Hazards for erosion are slight to moderate. Vegetation is characterized by ponderosa pine, Gambel oak, mountain muhly, muttongrass, blue grama. Puertecito-Paraje complex, 15 to 50 percent slopes. This soil consists of coarse cobbly loams with a rooting depth between 8		

<table>
<tr><td></td><td></td><td>to over 60 inches. Parent materials include: Slope alluvium and colluvium derived from sandstone and monzonite. Average annual precipitation in that area ranges from 10 to 13 inches. Vegetation is characterized by blue grama, New Mexico feathergrass, black grama, sideoats grama, galleta, oneseed juniper Gamble’s oak and twoneedle pinyon.

Puertecito-Wandurn-Rock outcrop complex, 30 to 60 percent slopes. This soil consists of gravelly sandy loams with a rooting depth between 10 and 20 inches. Parent materials include: Colluvium derived from monzonite over residuum weathered from monzonite. Average annual precipitation in that area ranges from 10 to 15 inches. Vegetation is characterized by blue grama, Gambel oak, oneseed juniper, black grama, broom snakeweed, galleta, twoneedle pinyon.

Zozobra-Jaconita complex, 5 to 25 percent slopes. These soils consist of gravelly sandy loams with rooting up to 20 to 35 inches. Parent materials include: alluvium derived from granite, gneiss, schist and loess. Average annual precipitation in this area ranges from 10 to 13 inches. Vegetation is characterized by black grama, blue grama, New Mexico feathergrass, galleta, sideoats grama, oneseed juniper and pinyon pine.</td></tr>
<tr><td></td><td>Land Status
Acreage</td><td><u>BLM</u> <u>State</u> <u>Private</u>
80 0 0</td></tr>
<tr><td></td><td>Management Objectives</td><td>The allotment is under a ‘Custodial’ (‘C’) management category. ‘C’ category allotments have evidence of a “not apparent” to “upward” long term trend, have no significant resource conflicts and have a low potential for improvement in vegetative production.</td></tr>
<tr><td></td><td>Key Forage Species</td><td>blue grama, black grama, sideoats grama, galleta</td></tr>
<tr><td></td><td>Grazing System</td><td>Rotational grazing with private lands</td></tr>
<tr><td>Management Evaluation</td><td>Actual Use</td><td>Actual use reports were not submitted. Use was determined by billed AUMs.
<table><tr><th>AUMs</th><th>Year</th></tr><tr><td>34</td><td>2009</td></tr><tr><td>34</td><td>2008</td></tr><tr><td>34</td><td>2007</td></tr><tr><td>34</td><td>2006</td></tr><tr><td>34</td><td>2005</td></tr><tr><td>34</td><td>2004</td></tr><tr><td>34</td><td>2003</td></tr><tr><td>non-use</td><td>2002</td></tr><tr><td>34</td><td>2001</td></tr><tr><td>34</td><td>2000</td></tr></table></td></tr>
<tr><td></td><td>Utilization</td><td>Due to the lack of staff utilization studies have not been conducted. During the assessment visit it was determined that the allotment was receiving slight to moderate amounts of utilization.</td></tr>
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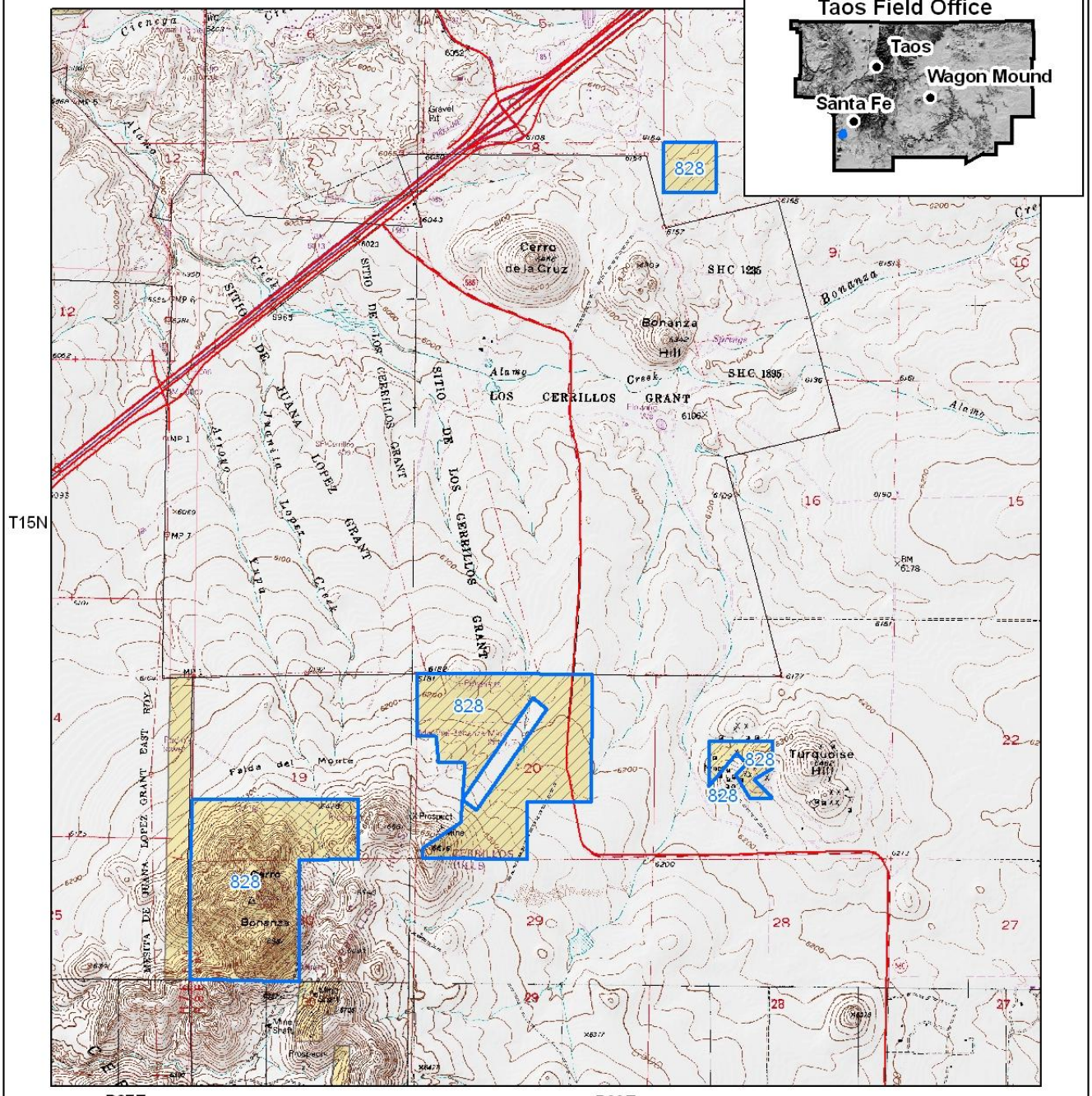
	Climate	The past water year (Oct. 1, 2008 – Sept. 30, 2009) the average temperature has been slightly above average (1 to 2 degrees Fahrenheit above average) and precipitation below average (6 to 8 inches below average). The winter was drier (.75 to 1.5 inches below normal) and was warmer (2 to 3 degrees Fahrenheit above average). The spring was drier (1.5 to 2 inches below normal) and was warmer (0 to 2 degrees Fahrenheit above average). This should provide below average plant growth for cool season plants. The summer precipitation was below average (3 to 4.5 below normal) and slightly warmer (0 to 1 above normal) which should provide below normal growth for warm season plants. Climate change is a concern not only in New Mexico but globally. "Effects of increasing atmospheric CO_2 levels on plants are predicted to cause dramatic changes in native vegetation. Global climate change may accelerate rates of plant extinction, while ecosystem structure and function may shift. Ecological response to global changes in climate could shift ecosystems (i.e., shrublands replacing grasslands) and have effects, not only to an individual species, but to the ecosystem itself by additions and deletions of vegetation species" (Johnson, H.B., and H.S. Mayeux. 1992. Viewpoint: A view on species additions and deletions and the balance of nature. Journal of Wildlife Management 45:322-333.) We anticipate that our monitoring efforts will help indicate vegetation shifts, allowing for management modifications to address global climate change.
	Trend	No long term trend plots have been established on this allotment. A Rangeland Health Matrix was completed on June 2, 2009. The actual survey forms are available within the allotment file. Below is a summation of the information gathered by the survey. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be 5(score)*10indicators=50/50*100 = 100% similarity, or what is expected based on an Ecological Site Description. Standards for each individual category are met when they are rated Proper Functioning Condition or Functioning at Risk-Upward Trend. Not meeting standards are ratings of; Functioning at Risk-Static, Functioning at Risk-Downward Trend and Non Functional.

		Soil and Site Stability One indicator was deemed None to Slight, five were deemed Slight to Moderate and four were deemed Moderate. Rating: 74% Hydrologic Function One indicator was deemed None to Slight, four were deemed Slight to Moderate and five were deemed Moderate. Rating: 72% Biotic Integrity Two indicators were deemed None to Slight, six were deemed Slight to Moderate and one was deemed Moderate. Rating: 82% Overall Rating: 76% Soils were rated at Functioning at Risk-Upward Trend, Flora was rated at Functioning at Risk-Upward Trend, and Biotic Fauna was rated at Functioning at Risk-Upward Trend. Current livestock use does not appear to being having an adverse affect on rangeland health.
	Riparian	There are no riparian areas within this allotment.
	Wildlife	Seasonal home ranges in the allotment include those for deer, bear, cougar, bobcat, fox, coyote, small mammals, bats, raptors, turkey vulture, songbirds, and a variety of insects. Deer are browsers/grazers; however there is little dietary overlap between deer and cattle. Best management practices would ensure that forage production within this area can support both wildlife and livestock on a sustained basis.
	Threatened and Endangered Species	It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment. Special status species that are likely to be found on the allotment include bald eagle and ferruginous hawk.
Conclusions and Recommendations		Overall, the allotment is in fair condition with fair diversity. Based on the past Allotment Evaluation in 1999, the allotment is still suffering from road construction on bordering lands and historical grazing practices. It appears that the allotment is improving, but diversity is still lacking. Monitoring will help establish true trend data and any possible changes in the future. It is recommended that grazing be renewed for another 10 years without any changes to the permit.



Mt. Chalchihuitl (828)

0 0.15 0.3 0.6 0.9 1.2 Miles

Legend

- Allotment Boundary
- Bureau of Land Management
- Private
- State

Produced by the BLM Taos Field Office - GIS on:
Friday, March 26, 2010

7.5' Topos: Tetilla Peak & Turquoise Hill